

Sherwood/APS 2006 Conference Final Report

Applicant Institution: American Physical Society

Address: 1 Physics Ellipse, College Park, MD 20740

PI: James F. Drake

Address: IREAP University of Maryland, College Park, MD 20742

Telephone: 301-405-1471

Email: drake@plasma.umd.edu

DOE/Office of Science Program Office: Office of Fusion Energy Sciences

DOE/Office of Science Technical Contact: Steve Eckstrand

The 2006 International Sherwood Theory Conference was held in conjunction with the 2006 April Meeting of the American Physical Society in Dallas, Texas, on April 22-25, 2006. This grant application was for partial support for this joint meeting.

The International Sherwood Theory Meeting is a yearly meeting that focuses on the theory of magnetically confined fusion plasmas. There are many topics of common interest in fusion plasma systems and space and astrophysical plasmas. These common topics include such key topics as magnetic reconnection, the dynamo, turbulence and transport and particle heating and acceleration. One of the major participants of the April APS meeting is the APS Division of Astrophysics (DAP). The goal of having the Sherwood Meeting jointly with the April meeting was to promote discussion of topics of common interest in fusion and space and astrophysics. Scientists from the DAP, the Division of Plasma Physics (DPP), the Topical Group on Plasma Astrophysics (GPAP) and Sherwood worked together closely to produce a joint program that addressed areas of common interest. Four sessions of invited talks were sponsored jointly by the DAP, DPP and GPAP on laboratory experiments related to astrophysics. Plasma scientists working in theory and computation play a key role in connecting these laboratory experiments to the very disparate conditions found in fusion and astrophysical systems. Thus, the attendees of the Sherwood Theory meeting were critical to facilitating this effort at cross-disciplinary communication. Noteworthy were the selection of two of the prestigious plenary talks at the joint meeting on plasma topics – one related to the gyrokinetic modeling of turbulence and the other related to the structure of collisionless shocks. It is rare to see even a single plenary talk on plasma physics at the APS April Meeting.

There were additional costs associated with hosting a joint meeting. The Office of Fusion Energy Sciences contributed \$3000 in partial support of this meeting. This funding covered part of the costs of the poster boards and A. V. equipment that was used in the presentation of nearly 200 scientific papers related to magnetically confined fusion plasmas. The APS waived its indirect costs on this funding as part of their effort to support this joint meeting.